



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,803	08/02/2001	James F. Hayes	3814	4294

7590

01/27/2004

DOUGHERTY, CLEMENTS & HOFER  
THE ROXBOROUGH BUILDING  
1901 ROXBOROUGH ROAD, SUITE 300  
CHARLOTTE, NC 28211

EXAMINER
----------

LORENZO, JERRY A

ART UNIT	PAPER NUMBER
----------	--------------

1734

DATE MAILED: 01/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Applicati n No.

09/919,803

Applicant(s)

HAYES, JAMES F.

Examin r

Jerry A. Lorengo

Art Unit

1734

-- The MAILING DATE f this communication appears on the c ver sheet with the correspondenc address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 21-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

(1)

### *Election/Restrictions*

Applicant's election without traverse of Group II, claims 21-25 in Paper No. 7 is acknowledged.

(2)

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of U.S. patent no. 3,936,542 to Cox.

Regarding applicant claim 21, the admitted prior art on page 3, lines 13-18 of the instant specification disclose that the lamination of a preformed elastomer (thermoplastic) film to a fabric through the use of an adhesive is known. The admitted prior art, however, does not specifically disclose, as per applicant claim 21, that the fabric, prior to coating with an adhesive, is coated with a curing compound that increases the viscosity of an adhesive applied thereon such that upon application of the adhesive and pressure lamination of the thermoplastic film thereto, the curing compound reduces penetration of the adhesive into the fabric as compared to a fabric manufactured without the curing compound.

Art Unit: 1734

Cox, however, also drawn to methods for the control of migration of synthetic resins applied to porous materials such as fibrous fabrics, discloses that the penetration of a coating material, such as a urethane, applied to a fabric can be controlled by the application of a curing compound, such as an amine, which causes the coating material, upon contact, to self-thicken and swell to a very great extent forming stable highly viscous gels (column 5, line 50; column 6, lines 5-15; column 7, lines 34-37).

It would therefore have been obvious to one of ordinary skill in the art at the time of invention to utilize the amine curing compound of Cox in the method of the admitted prior art in order to control the degree of penetration of the adhesive coating into the fabric motivated by the fact that Cox discloses that the coating of the fabric with the curing agent is effective in controlling the penetration of the coating material into the fabric thereby preserving the softness, drape and hand of the resulting non-woven or knitted fabric, a property which is of importance in the formation of airbags which will undergo compression and folding in use (column 5, lines 5-15; column 7, lines 60-62).

Although Cox discloses that the curing compound applied to the fabric controls the penetration of the coating compound applied thereto by increasing its viscosity through cross-linking (as in the case of an amine curing agent and urethane coating compound), he does not specifically disclose, as per applicant claims 22-24, that the curing compound substantially prevents the adhesive from entering the fabric. Nonetheless, it would have been obvious to one of ordinary skill in the art at the time of invention that the degree of penetration could be controlled to such an extent such that the coating is substantially prevented from entering the fabric motivated by the fact that Cox discloses that the coating compound penetration is minimal, i.e., penetration is substantially prevented.

(3)

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as combined above in further view of U.S. Patent No. 5,399,402 to Inoue et al.

The references as combined in section (1), above, disclose a method for the formation of a coated fibrous fabric comprising a fibrous fabric having a curing agent coated thereon which is laminated to a thermoplastic film via an adhesive. Although they do not specifically disclose, as per applicant claim 25, that the coated fabric comprises a silicone or acrylic-containing

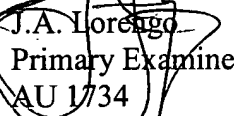
Art Unit: 1734

compound or mixture thereof applied to the film in an amount sufficient to prevent sticking or blocking of the coated fibrous fabric under heat and pressure, it would have been obvious to one of ordinary skill in the art at the time of invention to provide the coated fibrous fabric with such a coating on the thermoplastic film motivated by the fact that Inoue et al., also drawn to methods for the formation of coated fibrous fabric suitable for use in airbag manufacture, disclose that the provision of a silicone compound on the outside layer, i.e., film side, of the coated fibrous fabric provides a tack-free surface under effects of heat and pressure and avoids blocking which would otherwise normally occur when the bag is in its stowed and folded position prior to use (Figure 1; abstract; column 1, lines 37-40; column 2, lines 15-17; column 6, lines 40-51).

(4)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry A. Lorengo whose telephone number is (571) 272-1233. The examiner can normally be reached on Monday through Friday, 8:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. Please note that all patent application related correspondence transmitted by FAX must be directed to the central FAX number at 703-872-9306.



J.A. Lorengo  
Primary Examiner  
AU 1734  
January 20, 2004